WHAT IS CLAIMED

1. A method of increasing uptake of nucleic acids by swine muscle cells which comprises administering at least one excipient and at least one nucleic acid to a swine muscle cell wherein such excipient enhances the ability of the nucleic acid to traverse swine muscle cell membranes.

2. A method of enhancing expression of a nucleic acid in a swine muscle cell, comprising administering a composition comprising at least one excipient and at least one nucleic acid to a swine muscle cell.

3. A method of treating a subject comprising administering an effective amount of at least one excipient and at least one nucleic acid to enhance expression of said nucleic acid in a subject.

4. The method of Claims 1-3, wherein said excipient is selected from the group consisting of surfactants, bacterial toxins, and polysaccharides.

5. The method of claim 4, wherein said surfactant is selected from the group consisting of Triton X-100, sodium dodecyl sulfate, Pluronics (F68, P65, P84, F127, 25R2, and L62), Tween 20 and Tween 80.

6. The method of claim 5, wherein the surfactant is Tween 80.

7. The method of claim 6, wherein the concentration of said Tween 80 is 0.03-0.07%.

8. The method of claim 4, wherein said bacterial toxin is selected from the group consisting of streptolysin O, cholera toxin, and recombinant modified labile toxin (rmLT) of *E. coli*.

9. The method of claim 8, wherein said bacterial toxin is *E. coli* rmLT.

10. The method of claim 9, wherein the dosage of said E. coli rmLT is 23-27 ug.

11. The method of claim 4, wherein said polysaccharide is selected from the group consisting of glucose, sucrose, fructose, trehalose, and maltose.

12. The method of claim 11, wherein said polysaccharide is sucrose.

13. The method of claim 12, wherein the concentration of said sucrose is 3-7%.

14. The method of claim 4 further comprising dimethyl sulfoxide (DMSO) and SEPA.

15. The method of claim 14, wherein the excipient is DMSO.

16. The method of claim 15, wherein the concentration of said DMSO is 18-22%.

17. The method of claim 3, wherein said subject is a protist, a bird, a reptile, a monera, a bacterium, and a mammal.

18. The method of claim 17, wherein said mammal is a pig.

19. The method of claim 3, wherein said subject has a genetic or an acquired disorder which is diminished or eradicated after the treatment, compared with an untreated subject.

20. The method of claim 19, wherein said subject is a pig.

21. The method of claim 3, wherein said subject is a normal subject.

22. The method of claim 21, wherein said subject is a normal pregnant pig.

23. The method of claim 22, wherein the survival rate or viability of piglets is augmented by treating said normal pregnant mother pig with a plasmid containing a gene encoding porcine erythropoietin together with an excipient.

24. The method of claim 2, wherein said composition is administered by intramuscular injection.

25. The method of claims 1-3, wherein said excipients are administered concurrently with the nucleic acids or the therapeutic agents.

26. The method of claims 1-3, wherein said nucleic acid is a DNA.

27. The method of claim 26, wherein said DNA is a naked DNA.

28. The method of claim 18, wherein said naked DNA is a naked plasmid DNA.